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WISDOM IS COMMON SENSE TO AN UNCOMMON DEGREE.

THE REA LINEMAN

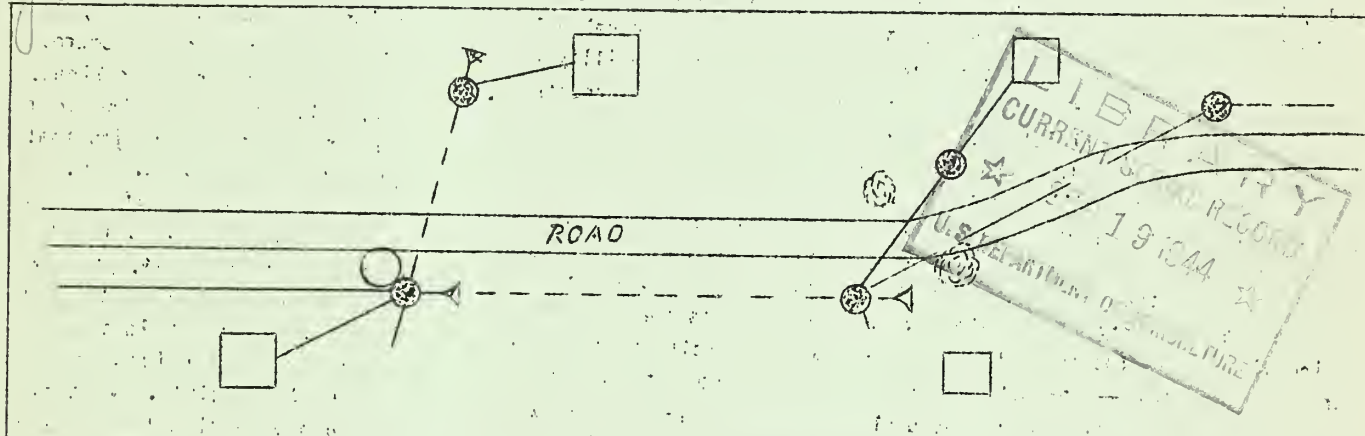
RURAL ELECTRIFICATION ADMINISTRATION U.S. DEPARTMENT OF AGRICULTURE

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St. Louis, Mo.

CO-OP LINEMAN LOSES LIFE FROM 110-VOLT SHOCK.



REPORT:

A lineman was pulling slack in a service drop from a pole on which a 2-wire 110-volt secondary was dead-ended. The primary dead end and the transformer were one span away. A second lineman was on the ground, having just finished pulling the guy. Some noise attracted his attention and he looked up to see the lineman on the pole lying back in his belt with his shoulder in the secondary neutral and the 110-volt hot wire against his side. He appeared to be completely unconscious.

The man on the ground shook the guy wire in an attempt to free the lineman, but was unsuccessful. He then ran to the truck to get his hooks. The lineman on the pole tumbled headlong to the ground.

His partner, seeing blood running from the victim's mouth, summoned assistance and took him to the hospital three miles away. Artificial respiration was attempted for some time. Examination disclosed a broken neck and bruises on the head and shoulders. No burns on any part of the body were reported.

The investigating committee believed that in changing his position on the pole, the lineman's hook did not take hold and slipped along the ground wire for several inches, allowing him to fall sideways into the hot 110-volt secondary. Electric shock rendered him unconscious and he fell to the ground, breaking his neck.

DISCUSSION:

This accident could not have been prevented by the wearing of rubber gloves. The contact was on the shoulder and the side of the body. We believe this man's death was due primarily to electric shock. The shock was responsible for his falling to the ground; otherwise, he would have perhaps just "burned" the pole which ordinarily results in a minor injury.

An attempt to administer artificial respiration at the scene of the accident might have been wrong — it could be seen that this man was seriously injured from the fall.

This accident does emphasize, however, the necessity for wearing rubber gloves on all poles carrying energized circuits even though that energized circuit may be 110 volts. Most contacts made with energized circuits are made with the hands and this case is very definite proof that 110-volt electric shock can easily result in death. The creosoted pine pole must be considered a good ground and in some cases completed the circuit — hot wire through the hand and body to the ground by way of the pole. However, this unfortunate lineman apparently had the circuit from the hot wire on his side to the secondary neutral on his shoulder.

The wearing of rubber gloves while working secondaries is good insurance with no premium to pay.

Published Monthly in the Interest of Safety
for Employees of REA Systems

David A. Fleming, Editor

NATIONAL FARM AND SAFETY WEEK

The week of July 23-29 is National Farm and Safety week. It's a good time to size up the safety situation as it affects ourselves and our farm.

Accident frequency and severity on the farm has increased at an alarming rate. There are several contributing factors; loss of trained young men from the farm to the armed forces; use of makeshift tools; long hours and fatigue; the necessity of using untrained young people in the operation of farm equipment; overlooking of a great many hazards, or their correction put off to a later date; the inability to obtain skilled workmen for the repair of plumbing, wiring, carpenter and mason work and machinists to repair farm machinery.

Most of the small grain has been cut. Considerable threshing is yet to be done. Corn will soon be laid by. May we urge that all farm people take the necessary time to eliminate those hazards that are readily seen and can be corrected? Fix that back step with the broken board, pick up the accumulation of tools and tackle in the harness room so that it won't be stumbled over. Then there's that piece of baling wire that holds the well pulley — that loose bolt in the drawbar on the tractor — the metal socket in the bathroom from which we sometimes receive a shock — the accumulation of tools in the driveway of the machine shed — the limb that has knocked our hat off so often when we are coming in the driveway. How about safety guards on the chains and gears of the wheat and corn binder, corn picker and various farm machinery that have loosened up, or come off altogether? Then there's that handle that should be replaced in the ax, the hay fork and the garden hoe — that light switch that does not work on the back stairs — the pile of rubbish that has been allowed to accumulate in the basement.

And let's not overlook the danger of picking up or stepping on fallen electric wires. Call the service man — but don't attempt to touch the wire yourself.

There are numerous cases reported of people attempting to restore their own service by placing a ladder on the transformer pole. Do not do this. Call a service man. He knows what he is doing and has the proper tools to do the job.

Serious accidents frequently occur from farmers attempting to remove old buildings or erecting new buildings near an energized line. Also beware the handling of pipe and cleaning rods around wells near energized lines, and the use of haying equipment near energized lines.

Children should be warned again about flying kites near transmission lines. Every attempt should be made to keep them from climbing poles, swinging on guy wires, breaking insulators and throwing objects into the lines to see the blue flame. Numerous tragic accidents have been the result of child's play.

Careless attention given small scratches and wounds around the farm has been responsible for a very high toll in life and limb. Danger spots are the rusty nail, the unhandy gate latch, the tin can with a jagged edge, a splinter from the broken handle, and the blisters on the hands and feet left unattended.

A LETTER TO A LINE CREW

"In reviewing our work for the last two years on maintenance and construction, it is my privilege to compliment you on a perfect no-lost-time accident record.

"The Board of Directors and the Manager take this method of thanking you. We realize the sacrifices you have made to give what we would call the best service possible. We know that most of you have had offers from different defense plants; employment at a better salary than we are paying, but since you were serving numerous defense loads from our lines, you felt you were doing your patriotic duty on the job that you are now holding. So, by doing your work safely and being available at all times for an emergency call, you have been indispensable to the war effort. Your job is to keep your lines energized at all times, if possible. We serve emergency landing fields, rifle ranges, beacon lights and radar stations for the army and navy. We also serve some housing projects, and last but not least, the farmer, to help with increased food production.

"Whenever you need safety equipment which you do not have on your trucks, it is your duty to call my attention to it. We shall discuss and buy it if possible.

"We have a safety director, and we have a meeting once each month in our Lucedale office. Make a note of questions to ask so that you can seek his advice on his next trip."

—A Co-op Manager

We take many of these things for granted. Hazardous conditions are allowed to exist with little thought of the tragic effect they may have. Be careful. Correct these unsafe conditions. Increased production will be the result.

AROUND THE STATES WITH SAFETY AND JOB TRAINING

Alabama - We have excellent reports of Mr. DeVaughan's activities. A well-balanced program is now under way in that state. Mr. A. B. Shehee made a short safety talk at the Statewide Meeting and was well received.

Georgia - Program being organized.

Ohio - Instructor C. A. High is now working with the Vocational Education people in setting up a program.

Illinois - No instructor as yet.

Iowa - Supervisor Ehlers reports better cooperation and seems to have a good program under way.

Mississippi - Instructor Stovall sends in excellent reports of meetings held. Correspondence indicates a very active and well-received program is in progress.

Kentucky - We have received a report of the Foremen's Training Conference. Mr. T. L. Hankins, Department of Industrial Education, University of Kentucky, was the Conference leader. We have received 175 copies of the report and have distributed them to the various committees, instructors and educational sponsoring agencies. This report is the outstanding job yet done by any Safety and Job Training Program organization.

North Carolina - No instructor employed as yet.

Virginia - Supervisor Heath sends us very good reports. We have every reason to believe that an excellent program is in progress in that state.

Texas - Instructor Reynolds reports an excellent meeting held at Douglasville, Texas, May 30.

Michigan - Supervisor Meyer continues with a very good program. We are pleased with reports from that state.

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SAFETY AND MAINTENANCE

Many cooperatives in labor-short areas are faced today with a hard choice—whether to make a given extension to a short-handed new member or make a badly-needed repair on a pole.

The new member can be heard, and his appeals often bring an extension. The damaged pole — perhaps the victim of a grass fire, washout or lightning — cannot.

Yet split, washed-out, graded-out and burned poles are a real hazard because conductors may get down to within reach of the ground, exposing the public. Many serious accidents have happened in this manner to linemen as well as others.

Ditching along roads, grading and washouts often disturb anchors. The pole seldom breaks at the time, but continues to stand and hold the strain—then a falling tree or some other strain on the guy can snap the pole—and fuses or oil circuit breakers do not always operate when the line goes down.

Loose hardware should be tightened; radio noise and line failures are the result, let alone the hazard to men working on the line. Loose pins, braces, arms and tie wires can result in tragic occurrences.

House knobs pulled out allowing the service to depend on the bushings or outlet to hold the weight can be dangerous, the service sagging down just enough to catch the top of the stock truck or a farm machine being moved.

Broken strands in conductors mean that some strength is gone or that the core is exposed and the wire may break at any time. Broken insulators may cause a midnight outage.

Bad tree conditions are not safe and most certainly are a serious hazard to service. The longer the tree is left untrimmed, the greater the hazard in trimming. Heavy limbs are difficult to handle, not to move, and permits to cut big limbs in a member's yard are hard to obtain. Stop that climbing vine before it becomes a hazard to the life of the pole and the safety of linemen.

Uneven and low sag cause many headaches and some injury. These conditions should not be left for some later date — uneven conductors create "bounce" resulting in vibration that is most destructive. Low sag will whip together and wrap up, resulting in burn-downs and outages — insufficient ground clearance is very unsafe.

Bad arresters and cut-outs cannot be overlooked. Loss of transformers will result. Disturbed grounds should be fixed immediately for the protection of the equipment as well as the protection to workmen. Your temporary protective grounds depend on the permanent grounds — your life may be at stake.

Substation yards must be kept clear of obstructions to stumble over. That broken gate-fastener that will not hold the lock is not good. Mashed down fences will not hold the unwanted.

Leaning transformer poles should be strengthened. Unpainted transformer cases will rust through in time. Oil testing and filtering saves many substation transformers.

Trucks, trailers and tools may have to last a long time before we can get replacements, let alone the many safety features involved.

For the woodpecker, flicker ("yellow hammer" to some of us), squirrels and birds, including hawks, eagles and cranes, we have no recommendations aside from glass transformer bushing covers. We cannot say that cooperative linemen should carry guns — they might not be good shots. Game wardens might be a little troublesome in some seasons. Perhaps we can all ask for some help in our prayers. Maybe some line foremen can scream loud enough to scare these little beasts and birds away but we can keep the maintenance work up to the extent of our manpower, even at the expense of some new work.

A young groundman starts to work on a cooperative and after a few months he is usually struck with the desire to become a lineman. Upon the least encouragement from his supervisor, a pair of hooks and a belt will appear on the truck and at any and all occasions that may arise, Mr. Groundman puts on his Irons.

His first difficulty is in walking. The gaffs seem to have a tendency to trip a fellow and his first attempt to climb causes him to wonder just how a man can be sure that the "dern things" will stay where you stick them.

After a few trials up to about six feet off the ground, and after learning to keep his knees out, this groundman develops the necessary intestinal fortitude to lay up a little wire and do a little secondary work.

The presence of hot burning feet, rubbed spots on the outside of his feet, on his ankles, knees, waistline and hip points, aches in the legs, shoulders and back, result in some setback in his desire to climb, but after considerable bending and twisting of the irons, addition of padding here and there, he ascends to the heights again. When he has juggled a few X arms, holding on with one hand, he develops his sense of balance and becomes a two-armed "Spur-Grunt".

The months roll around and his supervisor decides to try him on some not secondary work requiring rubber gloves. Right here is the real starting point of his education to become a good lineman. The rubber gloves covered with protectors and sometimes with cotton liners have about the same effect as if he had on boxing gloves, but with a little perseverance and with some appreciation for the nice clean looking hands, "Mr. Spur-Grunt" graduates into "Mr. Clum-Sum".

If "Mr. Clum-Sum" is taught that the rubber gloves on the hands are the best protection he has against electric shock accidents, he is well on his way to becoming a first class lineman, and unless he is impressed with the absolute necessity of wearing these gloves on all poles carrying energized circuits, it would be far better to send him back to the brick yard than to permit him to continue as a poor lineman, a hazard to other good linemen with whom he may work.

First class rural utility linemen have a responsibility that cannot be overlooked as protection of their own lives. "Mr. Clum-Sum" may be your future pole buddy. Your help in his training will be a credit to you. Set the example. Wear your rubber gloves. Refuse to work with any man who will not wear his rubber gloves. To a great extent your hands are your livelihood. Protect them with rubber gloves!



NATIONAL SAFETY COUNCIL MEMBERSHIP

The special membership offer to REA cooperatives by the National Safety Council is one of the cheapest and best services offered. There are now some limits on paper and we do not receive all the material that we would get in normal times, but we believe we still get a very good value. The Council furnishes us considerable literature and offers safety engineering services on any and all of our problems. Its findings are based on the nation-wide experience and solutions are worked out by some of the best technical minds in our industry. Engineering, chemical and medical questions are answered without charge. New problems are worked out at considerable expense to the Council. With your membership you get these:

1. National Safety News, monthly.
2. Public Utilities Section News Letter, monthly.
3. Six Safety posters, annually.
4. Safe Practices pamphlet PU-3.
5. Accident Facts, annually.
6. Safety Instruction Cards.
7. Safe At Home Pamphlet.
8. Home Safety News Letter, monthly.
9. Public Safety Magazine, monthly.
10. Consultation with the Council's safety engineering staff; Bureau of Information, or safety library facilities.

AROUND THE STATES

(Cont'd from page 3)

Oklahoma - Mr. Cralle, Chairman of the Safety and Job Training program, reports that all cooperatives will participate in the program for the coming year.